

ENERGY-INDUCED PROCESS MIGRATION**ABSTRACT OF THE DISCLOSURE**

Cluster systems having central processor units (CPUs) with multiple processors (MPs) are configured as high density servers. Power density is managed within the cluster systems by assigning a utilization to persistent states and connections within the cluster systems. If a request to reduce overall power consumption within the cluster system is received, persistent states and connections are moved (migrated) within the multiple processors based on their utilization to balance power dissipation within the cluster systems. If persistent connections and states, that must be maintained have a low rate of reference, they may be maintained in processors that are set to a standby mode where memory states are maintained. In this way the requirement to maintain persistent connections and states does not interfere with an overall strategy of managing power within the cluster systems.

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